IN THE CLAIMS

Please enter the following claim amendments ***instead of*** the claim amendments presented in Applicants' Response dated October 7, 2004 (which were not entered by the Examiner):

1. (Currently Amended) A ~~telecommunications signal transmitted on a synchronous bus for a telecommunications node,~~ data signal embodied in a carrier wave, the data signal comprising:

a frame repeating at a defined interval;

each frame comprising a plurality of service channels;

a first plurality of service channels in at least one frame each transporting traffic for a DS-0 connection, a current channel associated signaling (CAS) value for the DS-0 connection located within every service channel in the first plurality of service channels ~~comprising a current channel associated signaling (CAS) value for the DS-0 connection~~; and

a second plurality of service channels in the frame together transporting an asynchronous transfer mode (ATM) cell.

2. (Currently Amended) The ~~bus~~ data signal of Claim 1, wherein the defined interval comprises 125 microseconds and each service channel is two bytes in size.

3. (Currently Amended) The ~~bus~~ data signal of Claim 1, further comprising:

a point-to-point link between each line card and a switch core of a telecommunications node; and

each point-to-point link comprising the frame repeating at the defined interval.

4-5. (Cancelled)

6. (Currently Amended) The ~~bus~~ data signal of Claim 1, the second plurality of service channels further comprising a block of contiguous service channels.

7. (Currently Amended) The ~~bus~~ data signal of Claim 6, wherein the defined interval comprises 125 microseconds, each service channel is two bytes in size, and the block of contiguous service channels comprise 27 service channels.

8. (Currently Amended) The ~~bus~~ data signal of Claim 1, the second plurality of service channels comprising a first set of service channels, further comprising a second set of

service channels together transporting traffic for an integrated services digital network (ISDN) connection.

9. (Currently Amended) The ~~bus~~ data signal of Claim 8, the second set of service channels further comprising a block of contiguous service channels together transporting two B-channels and a D-channel of the ISDN connection.

10. (Currently Amended) The ~~bus~~ data signal of Claim 9, wherein the defined interval comprises 125 microseconds and each service channel is two bytes in size.

11. (Currently Amended) The ~~bus~~ data signal of Claim 1, further comprising:

each frame further comprising an overhead portion;

the overhead portion comprising an internode communication channel; and

the internode communication channel in at least one frame transporting control traffic generated by a line card of a telecommunications node transmitting the frame and destined for a disparate element of the telecommunications node.

12. (Currently Amended) The ~~bus~~ data signal of Claim 11, wherein the disparate element of the telecommunications node comprises a disparate line card.

13. (Currently Amended) The ~~bus~~ data signal of Claim 11, wherein the disparate element of the telecommunications node comprises a switch card.

14. (Currently Amended) A telecommunications node, comprising:

a line card operable to:

generate a frame comprising a plurality of service channels each sized to individually transport DS-0 traffic, and to insert DS-0 traffic into a first plurality of service channels in the frame, a current channel associated signaling (CAS) value for a DS-0 connection located within every service channel in the first plurality of service channels ~~comprising a current channel associated signaling (CAS) value for a DS-0 connection~~;

insert asynchronous transfer mode (ATM) cells into a second plurality of service channels in the frame;

repeat the frame at a defined interval on a synchronous bus; and

a switch core operable to receive the frame from the synchronous bus and to synchronously switch the DS-0 traffic and the ATM cells.

15. (Original) The telecommunications node of Claim 14, further comprising the line card operable to repeat the frame on a point-to-point link between the line card and the switch core.

16. (Previously Presented) The telecommunications node of Claim 14, wherein each service channel is sized to transport in connection with a third plurality of service channels integrated services digital network (ISDN) traffic, further comprising:

the line card operable to insert the ISDN traffic into the third plurality of service channels in the frame; and

the switch core operable to synchronously switch the ISDN traffic.

17. (Previously Presented) The telecommunications node of Claim 14, wherein each frame of the bus comprises an overhead portion including an internode communication channel further comprising:

the line card operable to:

generate control traffic destined for a disparate element of the telecommunications node;

insert the control traffic into the internode communication channel of a frame; and

transmit the frame to the switch core; and

the switch core operable to switch the control traffic to the disparate element based on the position of the control traffic in the internode communication channel.

18. (Currently Amended) A method for communicating traffic between elements in a telecommunications node, comprising:

repeating a frame at a defined interval on a synchronous bus,

providing a plurality of service channels in each frame;

in at least one frame, each transporting traffic for a DS-0 connection in a first plurality of service channels, a current channel associated signaling (CAS) value for the DS-0 connection located within every service channel in the first plurality of service channels ~~comprising a current channel associated signaling (CAS) value for the DS-0 connection~~;

in the frame, transporting an asynchronous transfer mode (ATM) cell in a second plurality of service channels; and

synchronously switching the DS-0 traffic and the ATM cell in the frame.

19. (Previously Presented) The method of Claim 18, wherein each service channel is two bytes in size, further comprising repeating the frame at 125 microsecond intervals.

20. (Previously Presented) The method of Claim 18, wherein the synchronous bus comprises a point-to-point link, further comprising repeating the frame at a defined interval on a point-to-point link.

21. (Cancelled)

22. (Previously Presented) The method of Claim 18, wherein the second plurality of service channels comprise a block of contiguous service channels.

23. (Previously Presented) The method of Claim 18, further comprising transporting traffic for an integrated services digital network (ISDN) connection in a third plurality of service channels of the frame.

24. (Previously Presented) The method of Claim 18, further comprising:

providing in each frame an overhead portion including an internode communication channel;

generating control traffic at a line card of ~~a~~ the telecommunications node;

inserting the control traffic into an internode communication channel of a frame;

transmitting the frame from the line card to a switch core of the telecommunications node; and

synchronously switching the control traffic at the switch core to a destination element in the telecommunications node based on a position of the control traffic in the internode communication channel.

25. (Currently Amended) A ~~telecommunications signal transmitted on a synchronous bus for a telecommunications node,~~ data signal embodied in a carrier wave, the data signal comprising:

a frame transmitted in a 125 microsecond interval;

the frame comprising a plurality of service channels;

a first plurality of service channels each transporting traffic for a DS-0 connection, a current channel associated signaling (CAS) value for the DS-0 connection located within every service channel in the first plurality of service channels ~~comprising a current channel associated signaling (CAS) value for the DS-0 connection~~; and

a second plurality of service channels together forming a block of contiguous service channels transporting an asynchronous transfer mode (ATM) cell, the block of contiguous service channels located at a position in the frame associated with a destination element for the ATM cell.

26. (Currently Amended) The ~~telecommunications~~ data signal of Claim 25, the frame further comprising an overhead portion including an internode communication channel, the internode communication channel comprising:

control traffic generated by a line card transmitting the frame; and

the control traffic located at a position in the internode communication channel associated with a destination element for the control traffic.

27. (Currently Amended) The ~~telecommunications~~ data signal of Claim 25, a third plurality of service channels in the frame together transporting traffic for an integrated services digital network (ISDN) connection.

28. (Currently Amended) The ~~telecommunications~~ data signal of Claim 27, the third plurality of service channels comprising a block of contiguous service channels together transporting two B-channels and a D-channel of the ISDN connection.

29. (Previously Presented) A line card for a telecommunications node, comprising:

a port operable to receive traffic from an external link;

an internal interface operable to connect to a point-to-point link of a synchronous bus; and

a traffic processor operable to:

generate a frame comprising an overhead portion having an internode communication channel and a service traffic portion comprising a plurality of service channels, the plurality of service channels each sized to individually transport DS-0 traffic;

generate control traffic destined for a disparate element in the telecommunications node;

insert the control traffic into a slot in the internode communication channel associated with the disparate element;

insert DS-0 traffic received at the port and a current channel associated signaling (CAS) value for the DS-0 traffic into every one of a first plurality of service channels in the frame;

insert an asynchronous transfer mode (ATM) cell received at the port into a second plurality of service channels in the frame associated with the disparate element for the ATM cell within the telecommunications node; and

transmit the frame on the point-to-point link of the synchronous bus.

30-32. (Cancelled)

33. (Previously Presented) The line card of Claim 29, wherein the traffic processor is further operable to insert integrated services digital network (ISDN) traffic into a third plurality of service channels in the frame.

34-36. (Cancelled)

37. (Currently Amended) A system for communicating traffic between elements in a telecommunications node, comprising:

a computer-readable medium; and

software stored on the computer-readable medium, the software operable to:

repeat a frame at a defined interval on a synchronous bus;

provide a plurality of service channels in each frame, the plurality of service channels each sized to individually transport DS-0 traffic;

transmit, in at least one frame, traffic for a DS-0 connection in a first plurality of service channels, a current channel associated signaling (CAS) value for the DS-0 connection located within every service channel in the first plurality of service channels ~~comprising a current channel associated signaling (CAS) value for the DS-0 connection~~;

transmit in the frame an asynchronous transfer mode (ATM) cell in a second plurality of service channels; and

synchronously switch DS-0 traffic and ATM cells received in a frame.

38. (Previously Presented) The system of Claim 37, wherein each service channel is two bytes in size, the software operable to repeat the frame at 125 microsecond intervals.

39. (Previously Presented) The system of Claim 37, wherein the synchronous bus comprises a point-to-point link, the software further operable to repeat the frame at a defined interval on the point-to-point link.

40. (Cancelled)

41. (Previously Presented) The system of Claim 37, wherein the second plurality of service channels comprises a block of contiguous service channels.

42. (Previously Presented) The system of Claim 37, wherein the software is further operable to transmit traffic for an integrated services digital network (ISDN) connection in a third plurality of service channels of the frame.

43. (Previously Presented) A traffic processor for a line card of a telecommunications node, comprising:

a computer-readable medium; and

software stored on the computer-readable medium, the software operable to:

generate a frame comprising an overhead portion having an internode communication channel and a service traffic portion comprising a plurality of service channels;

generate control traffic destined for a disparate element in the telecommunications node, the control traffic comprising a control message free of addressing information;

insert the control traffic into a slot in the internode communication channel associated with the disparate element;

insert DS-0 traffic received at a port and a current channel associated signaling (CAS) value for the DS-0 traffic into every one of a first plurality of service channels in the frame;

insert an asynchronous transfer mode (ATM) cell received at a port into a second plurality of service channels in the frame associated with the disparate element for the ATM cell within the telecommunications node; and

transmit the frame on a point-to-point link of a synchronous bus.

44-46. (Canceled)

47. (Previously Presented) The traffic processor of Claim 43, wherein the software is further operable to insert integrated services digital network (ISDN) traffic into a third plurality of service channels in the frame.